

## REMARKS

Claims 21-52 are in the application. Claims 36-42, 50 and 52 are amended to more positively recite the invention. No claims are allowed or allowable.

Claims 38-42 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The Office Action alleges that specifically regarding claim 38, the specification does not speak of more than one metal oxide film on the metal film.

Applicants respectfully traverse the rejection of claims 38-42 under 35 U.S.C. 112, first paragraph. Applicants respectfully submit that the specification does not exclude more than one metal oxide film on the metal film, and therefore, claim 36 on which claim 38 is dependent covers more than one metal oxide film on the metal film. Applicants, however, to eliminate this issue have amended claim 38 to be dependent on, and to be consistent with claim 48. Claims 39-42 are amended to be consistent with amended claim 38.

Support for the amendments to claims 38-42 is found, among other places, in the pending claims. Based on the forgoing, applicants respectfully request admittance of the amendments to, consideration of, and withdrawal of the 35 U.S.C. 112, first paragraph rejection of, claims 38-42.

Claim 40 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicants respectfully traverse the rejection of claim 40 under 35 U.S.C. 112, first paragraph, however, to eliminate this issue claim 40 is amended to recite that the density of the first metal oxide film (the crystalline metal oxide film) is 4 grams per cubic centimeter and the refractive index of the first metal oxide film is 2.5.

Support for the amendment to claim 40 is found, among other places, in the specification and the pending claims. Based on the forgoing, applicants respectfully request admittance of the amendment to, consideration of, and withdrawal of the 35 U.S.C. 112, first paragraph rejection of, claim 40.

Claims 50 and 52 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The Office Action alleges that specifically does not speak of a crystalline metal oxide film over the amorphous metal film.

Applicants respectfully traverse the rejection of claims 50 and 52 under 35 U.S.C. 112, first paragraph. Applicants respectfully submit that the specification does not exclude a crystalline metal oxide film over the amorphous metal film. Applicants, however, to eliminate this issue have amended claim 50 to be dependent on, and to be consistent with claim 48. Claim 52 is amended to be consistent with amended claim 50.

Support for the amendments to claims 50 and 52 are found, among other places, in the pending claims. Based on the forgoing, applicants respectfully request admittance of the amendments to, consideration of, and withdrawal of the 35 U.S.C. 112, first paragraph rejection of, claims 50 and 52.

Claims 36 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The Office

Action alleges that claim 36 on which claim 37 is dependent is indefinite because the thermally oxidized step of claim 36 transforms the metal film into an oxide film, but claim 21 already establishes that the film is a metal film.

Applicants respectfully traverse the rejection of claims 36 and 37 under 35 U.S.C. 112, second paragraph, however to eliminate this issue, claim 36 is amended to be dependent on, and to be consistent with, claim 51. Claim 37 is amended to be consistent with amended claim 36.

Support for the amendments to claims 36 and 37 is found, among other places, in the pending claims. Based on the forgoing, applicants respectfully request admittance of the amendments to, consideration of, and withdrawal of the 35 U.S.C. 112, second paragraph rejection of, claims 36 and 37.

Claims 21-52 are rejected under 35 U.S.C. 102(e) as anticipated by, or in the alternative under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 5,589,280 to Gibbons et al. (hereinafter also referred to as "Gibbons").

Applicants respectfully traverse the rejection of Claims 21-52 under 35 U.S.C. 102(e) as anticipated by, or in the alternative under 35 U.S.C. 103(a) as obvious over Gibbons. The Office Action directs applicants' attention to selected passages of Gibbons. Applicants have considered the selected passages of Gibbons and respectfully submit that Gibbons discloses that the titanium target can be used to sputter a metal or a metal oxide. In the instance where small amounts of oxygen are present the metal film has portions that are metal oxide. There is no disclosure in Gibbons that a metal target, e.g. a titanium target can be sputtered in an atmosphere of argon and oxygen to deposit an amorphous metal film.

Applicants have shown that there is no disclosure in the prior art applied during the prosecution of this application taken alone or in combination of applicants patentably novel invention recited in claims 21- 52. Nevertheless, to move this application to allowance, attached herewith are Declarations Under 37 C.F.R. 1.131 of James J. Finley and Mehran Arbab the

applicants of the above-identified application, and the undersigned Donald Lepiane providing a record of their activity to demonstrate evidence of conception and diligence from a date before the filing date of Gibbons until the filing of Patent Application Serial No. 08/151,229 which is the grandparent of the above-identified application. More particularly, Section C of the MOI of Exhibit A of the Declarations describe the invention of sputtering of a metal, e.g. titanium in an atmosphere of oxygen and argon to deposit an amorphous metal coating and the notebook pages of Mehran Arbab and the ATD Monthly Letters are evidence of practicing the invention before the filing date of Gibbons and the practice of diligence up to the filing of the grandparent application. Based on the forgoing, applicants respectfully request withdrawal of the rejection of claim 21-52 under 35 U.S.C. 102(e) as anticipated by, or in the alternative under 35 U.S.C. 103(a) as obvious over, Gibbons.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons as applied to claims 21-52 above, and further in view of U.S. Patent No. 4,188,452 to Groth (hereinafter also referred to as "Groth"). Applicants respectfully traverse the rejected of claim 37 under 35 U.S.C. 103(a) as being unpatentable over Gibbons as applied to claims 21-52 above, and further in view of Groth and request reconsideration thereof. Applicants respectfully submit that there is no disclosure in the Gibbons and Groth of combining the reference to disclose the embodiment of the invention recited in claim 37. Further as discussed above, the attached Declarations provide evidence to demonstrate that applicants conceived and practiced the claimed invention before the filing date of Gibbons, and the practice of diligence from a conception date prior to the filing date of Gibbons up to the filing of the grandparent application.

Based on the forgoing, applicants respectfully request withdrawal of the rejected of claim 37 under 35 U.S.C. 103(a) as being unpatentable over Gibbons as applied to claims 21-52 above, and further in view of Groth.

Claims 21-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons in view of U.S. Patent No. 4,522,844 to Khanna et al. (hereinafter also referred to as "Khanna"). Applicants respectfully traverse the rejection of claims 21-52 under 35 U.S.C. 103(a) as being unpatentable over Gibbons in view of Khanna and request reconsideration thereof.

Applicants respectfully submit that there is no disclosure in Gibbons and Khanna of combining the references to disclose the embodiments of the invention recited in claims 21-52. Further as discussed above the attached Declarations provide evidence to show that applicants conceived and practiced the invention before the filing date of Gibbons, and the practice of diligence from a conception date prior to the filing date of Gibbons up to the filing of the grandparent application.

Based on the forgoing; applicants respectfully request withdrawal of the rejection of claims 21-52 under 35 U.S.C. 103(a) as being unpatentable over Gibbons in view of Khanna.

Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons in view of Khanna as applied to claims 21-52, above, and further in view of Groth. Applicants respectfully traverse the rejection of claim 37 under 35 U.S.C. 103(a) as being unpatentable over Gibbons in view of Khanna as applied to claims 21-37 and further in view of Groth and request reconsideration thereof.

Applicants respectfully submit that there is no disclosure in Gibbons, Khanna and/or Groth of combining the references to disclose the embodiment of the invention recited in claim 37. Further as discussed above the attached Declarations provide evidence to show that applicants conceived and practiced the invention before the filing date of Gibbons, and practiced diligence from a conception date prior to the filing date of Gibbons up to the filing of the grandparent application.

Based on the forgoing, applicants respectfully request withdrawal of the rejection of claim 37 under 35 U.S.C. 103(a) as being unpatentable over Gibbons in view of Khanna as applied to claims 21-52 and further in view of Groth, and request allowance of claims 21-52

This amendment represents a sincere effort to place this application in condition for allowance. In the event issues remain, the Examiner is invited to call the undersigned to discuss those issues before action is taken on the case.

Respectfully submitted,



Donald C. Lepiane  
Registration No. 25, 996  
Attorney for Applicant

Telephone: 412-434-2884  
Facsimile: 412-434-4929

Pittsburgh, Pennsylvania  
April 15, 2005